

## ABSTRACT

A method for measuring by means of ionization mobility spectrometry relatively high concentrations of water in argon, hydrogen, nitrogen and helium, characterized by comprising the followings operative steps:

- introducing the gas to be analyzed into an IMS instrument (10) with a counter-flow of pure gas;
- obtaining a signal (19) variable during the time and proportional to the number of ions detected by an ion detector (14) of the IMS instrument (10);
- 10 - determining two time intervals (A, B) corresponding to the drift times in the IMS instrument (10) of the  $H_3O^+$  and  $(H_2O)_2^+$  ions;
- obtaining the peaks of said signal (19) in the two determined time intervals (A, B);
- 15 - calculating the water concentration in the gas to be analyzed according to the ratio between the intensity of the two peaks obtained in the signal (19).

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